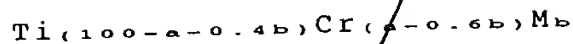


What is claimed is:

1. A hydrogen storage metal alloy which has
  - (1) as its main phase a body-centered cubic structure-type phase enabling the adsorption and desorption of hydrogen, and
  - (2) a composition of the following general composition formula:

0943625-03404

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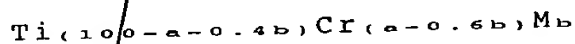


wherein M is vanadium (V), provided that  $20 \leq a$  (at%)  $\leq 80$ , and  $0 \leq b$  (at%)  $\leq 10$ .

2. The hydrogen storage metal alloy according to Claim 1 wherein a level of the constituent element V contained in the alloy is within a range of  $6 \pm 2$  at %.

3. A hydrogen storage metal alloy which has  
(1) as its main phase a body-centered cubic structure-type phase enabling the adsorption and desorption of hydrogen, and

(2) a composition of the following general composition formula:

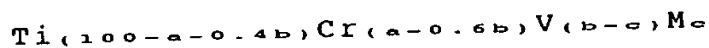


wherein M is at least a member selected from molybdenum (Mo) and tungsten (W), provided that  $20 \leq a$  (at%)  $\leq 80$ , and  $0 \leq b$  (at%)  $< 5$ .

4. The hydrogen storage metal alloy according to Claim 3 wherein a level each of the constituent element Mo and/or W contained in the alloy is within a range of  $3 \pm 1.5$  at %.

5. A hydrogen storage metal alloy which has  
(1) as its main phase a body-centered cubic structure-type phase enabling the adsorption and desorption of hydrogen, and

(2) a composition of the following general composition formula:



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(2) keeping the homogenized alloy heat at a temperature within a range just below the melting point of the alloy for a predetermined time (heat treatment), and

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(3) rapidly cooling the alloy after the heat

treatment (quenching step).

10. The process of Claim 9 wherein melting and solidification may be carried out repeatedly  
5 predetermined times at the aforementioned melting step.

*Sub A3* 11. The process of Claim 9 or 10 wherein the predetermined time range at the aforementioned heat  
10 treatment is from 1 minute to 100 hours.

*Sub A3* 12. The process according to any of Claims 9 to 11 wherein the element ratios are those described  
15 in any of Claims 1 to 8 regarding the hydrogen storage metal alloy products.

*add A4*

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